

REMARKS

Claims 1 - 14 remain active in this application. The indication of allowability of claims 1 - 11 is noted with appreciation. Claim 14 has been amended to improve grammar. No new matter has been introduced into the application.

Claims 12 - 14 have been rejected under 35 U.S.C. §102 as being anticipated by Rees et al. This ground of rejection is respectfully traversed.

The invention, in general, is directed to improvement of insertion loss and insertion loss deviation across an array of lenses including collimators and reduction of size of such an optical module by making at least one of the collimators different in at least one optical characteristic parameter such that the beam waist on the input and output sides of the optical module are substantially coincident. Claims defining the invention in such terms have been allowed. The invention, as recited in claims 12 - 14, defines a particular manner in which a characteristic optical parameter is adjusted (see page 10, line 23, to page 11, line 2) and which has the additional advantageous effect of attenuating the intensity of the light that is reflected back toward the input side (see page 11, lines 15 - 20). This particular lens array is defined in claims 12 - 14 in terms of the surfaces of the lens array in which one surface is perpendicular to the optical axis and the other surface is inclined thereto with the end surfaces of the *individual* gradient index rod lenses being flush with the respective surfaces of a frame defining those surfaces and in which the gradient index rod lenses are supported in an array with each rod lens parallel to the optical axis.

Rees et al. is directed to an array of gradient index rod lenses having image size reduction

properties. To achieve these properties, the gradient index rod lenses are placed at an angle to each other which varies across the lens in a "fan-like" fashion (e.g. only one fiber or a small group of fibers is parallel to the optical axis) and both end faces of the individual rod lenses are either correspondingly angled or both surfaces made perpendicular to the axis of the respective individual rod lens such that a reduced size image formed by each individual gradient index rod lens will overlap with all others. See, for example, Figures 3, 13A and 13B. Further, while Rees et al. details the required fiber geometry required to achieve superposition of images from individual rod lenses, it is substantially silent in regard to the structure of a frame for supporting the lens array.

Thus, Rees et al. does not and, consistent with its intended purpose, cannot answer the recitations of:

"A wedge-shaped rod lens array",

"a plurality of gradient index rod lenses ... each extending in parallel to an optical axis direction", or

"a frame supporting the gradient index rod lenses, and having a first end surface perpendicular to the optical axial direction, and a second end surface inclined with respect to the optical axial direction"

(claim 12, emphasis added).

Further, while Rees et al. may incidentally teach or suggest the individual rods lens end surfaces being flush with the overall lens surface, it cannot teach or suggest the rod lens end surfaces being flush with a surface of a frame; which surface is positioned as recited in claim 12, as noted above, or claim 13, depending therefrom, which recites a frame surface perpendicular to the optical axis in combination with the inclined frame surface as recited in claim 12, noted above.

In regard to claim 14, it is also respectfully submitted that the Examiner asserts inherency in a manner which is necessarily improper. For inherency to be properly asserted in regard to a demonstration of anticipation, the feature asserted to be inherent must necessarily follow from the subject matter which is disclosed in the reference. The Examiner merely states that the *possibility* of using optical fibers in combination with the lens array is inherent; which assertion is thus clearly improper on its face. Moreover, the statement of the rejection is silent as to the geometry of the optical fibers explicitly recited in claim 14.

Therefore, it is respectfully submitted that Rees et al. does not, in fact, anticipate any claim in the application and, moreover, cannot even be properly modified to answer the recitations of the claims for the simple reason that any such modification would necessarily preclude the intended function of Rees et al. See *In re Gordon*, 221 USPQ 1125 (fed. Circ., 1984). Moreover, it is readily apparent that Rees et al. does not contain the teachings which the Examiner attributes to it. For example, the Examiner makes references to a "frame 10, 18, 114" while reference numerals 10 and 18 do not appear to be used in Rees et al. and reference numeral 114 in Figure 14 clearly does not have the recited geometry, as illustrated, and is referred to at column 11, line 43, simply as a "lens".

Therefore, it is respectfully submitted that Rees et al. does not, in fact, contain the teachings or suggestions which the Examiner attributes to it and the Examiner has not made (and cannot make) a *prima facie* demonstration of anticipation of any claim in the application, particularly claims 12 - 14, based on the teaching of Rees et al. and, moreover, Rees et al. cannot be properly modified to answer any of the above-noted claim recitations without necessarily precluding

the intended function of Rees et al. Accordingly, it is respectfully submitted that the asserted ground of rejection of claims 12 - 14 is clearly in error and reconsideration and withdrawal of the same is in order and respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham, Curtis & Christofferson).

Respectfully submitted,



Marshall M. Curtis
Reg. No. 33,138

Whitham, Curtis & Christofferson, P. C.
11491 Sunset Hills Road, Suite 340
Reston, Virginia 20190

Customer Number: **30743**
(703) 787-9400